

Amendment and Response Under 37 C.F.R. 1.116

Applicant: Leo W. Spychalla

Serial No.: 10/725,259

Filed: December 1, 2003

Docket No.: 10413US01

Title: DATA STORAGE CARTRIDGE WITH HARD DRIVE AND ALIGNMENT FEATURE

REMARKS

The following remarks are made in response to the Final Office Action mailed May 26, 2005. Claims 1-20 were rejected. With this Response, claim 18 is been amended. Claims 1-20 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 102

The Examiner rejected claim 18 under 35 U.S.C. § 102(b) as being anticipated by Lu et al. (U.S. Patent No. 6,317,317). Amended independent claim 18 recites a method of assembling a hard drive to a housing. The recited method includes "providing a housing of data storage cartridge formed of a polymeric material" and placing the hard drive within the housing. Lu fails to disclose such features.

In particular, Lu fails to disclose a housing "formed of a polymeric material." Rather, Lu discloses an upper cover 10 and a lower cover 30 each made of metal to prevent electromagnetic waves produced in operation of the hard disc from escaping the insertion cartridge 1 (col. 2, l. 29-32; abstract). Therefore, not only does Lu fail to disclose a housing formed of a polymeric material as recited in amended claim 18, but Lu teaches away from any non-metal housing. Therefore, amended independent claim 18 is believed to be allowable over Lu, and withdrawal of the associated rejection is requested.

Dependent claims 19 and 20 depend from amended independent claim 18, which, as described above, is believed to be allowable over Lu. Consequently, dependent claims 19 and 20 are also believed to be allowable over Lu, and withdrawal of the associated rejections is requested.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1-17 under 35 U.S.C. § 103(a) as being unpatentable over Lu in view of Crockett (U.S. Patent No. 6,061,231). Independent claim 1 recites a data storage cartridge including a housing, an access window, and a hard drive maintained within the housing. The housing defines an interior cavity and at least one alignment feature positioned within the interior cavity. The hard drive is maintained within the interior cavity and has at least

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one electrical connection point. The at least one alignment feature is configured to at least partially align the at least one electrical connection point relative to the access window. The cited references fail to teach these features of independent claim 1. In particular, the Final Office Action admits that Lu fails to teach the use of alignment features (p. 3), and there is no suggestion to combine the support members 18, 20 or the posts 52 disclosed in Crockett with the teachings of Lu to create any internal housing features, nonetheless the alignment features recited in independent claim 1.

In the Final Office Action, the Examiner states that the mere fact that members of Crockett serve to isolate and set apart the display 10 from the housing 12 of Crockett is motivation to combine such isolating members with the teachings of Lu. The Applicant respectfully disputes this assertion. In particular, as stated in the Final Office Action, Crockett may teach use of isolating members 24 and support member 20 within the assembly 10 to "isolate" or "set apart the display 10 from the housing 12 itself for at least the reason that in the event that there were vibrations or shock, the display 10 would not be damaged" (p. 9; p. 4). However, the benefit that the isolation members provide to the display assembly of Crockett do not automatically transfer to other non-display related assemblies that may not be susceptible to damage due to vibrations or shock, such as the assembly of Lu. In particular, if other non-display assemblies do not benefit from isolation from an outer cover, there would be no suggestion to add the isolation features of Crockett to such assemblies.

For example, with reference to Figure 1, Lu teaches placement of a hard disk 20 *directly* onto the main planar surface of the lower cover 30. Lu does not disclose or suggest that vibration between the covers 10, 30 and the hard disk 20 may cause damage to the hard disk 20, nor does Lu disclose or suggest any other reason to isolate or space the covers 10, 30 from the hard disk 20. Therefore, Lu fails to explicitly or inherently suggest any reason to isolate or otherwise space hard disk 20 from covers 10, 30. Since isolation of hard disk 20 from covers 10, 30 is not a concern in Lu, Lu would not benefit from such a combination, and therefore, there is no suggestion to add the isolation members of Crockett to the insertion cartridge of Lu.

Furthermore, the hard disk 20 of Lu fits tightly within the insertion cartridge 1. Consequently, when placed within the lower cover 30, the hard disk 20 interacts with the side

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walls of the lower cover 30 to automatically align its electrical connection with the associated window. Therefore, there is no need, benefit, or suggestion to add any alignment features to the covers 10 or 30, since the hard disk 20 is automatically aligned with covers 10, 30.

Notably, the "relatively tight" term used in Applicant's previous Response (page 8) and cited in the Final Office Action (page 8) referred to the hard disk being tight relative to the fit described within the current application and is not an admission that the hard disk 20 is not tightly maintained within the insertion cartridge 1 as claimed by the Examiner. Rather, as evident by the context of the Response paragraph surrounding the cited term, "relatively tight" was meant to state that the hard disk 20 of Lu fits within lower cover 10 in a sufficiently tight manner such that, during insertion into lower cover 30, the hard disk 20 interacts with the side walls of the lower cover 30 to automatically align the electrical connection point of the hard disk 20 with the window. Since the electrical connection point is already aligned with the window, the addition of any alignment features, such as any alignment features disclosed in Crockett, to the upper or lower covers 10, 30 would be unnecessary and superfluous.

Furthermore, as described in Applicant's Response to the first Office Action, Lu not only fails to suggest combination with Crockett, but also teaches away from the addition of any features that further complicate the design. The insertion cartridge of Lu is configured to simplify the manufacturing process of adding a hard disk 20 to a portable computer by reducing the need for screws and thread holes that must be aligned and mated (col. 1, l. 31-34). Adding any alignment or other internal features to the insertion cartridge 1 would complicate the assembly of the hard disk 20 to cover 10, which would in turn complicate the overall assembly of the hard disk with a portable computer. This unnecessary complication would be contrary to and would render the insertion cartridge unsatisfactory for Lu's stated purpose to simplify assembly. Therefore, Lu teaches away from any such modification of the insertion chamber with the features of Crockett to arrive at the combination of features recited in independent claim 1 of the current application.

In summary, there is no suggestion to combine the cited references since the hard disk 20 would not benefit from the addition of any isolation or alignment members and because such combination would be contrary to the stated purpose of Lu. Therefore, for at least the reasons

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described above, Applicant believes independent claim 1 to be allowable, and withdrawal of the associated rejection is requested.

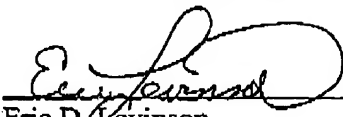
Dependent claims 2-17 depend from independent claim 1, which as described above is believed to be allowable over the cited references. Consequently, dependent claims 2-17 are also believed to be allowable over the cited references, and withdrawal of the associated rejections is requested.

CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-20 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-20 is respectfully requested.

The Examiner is invited to contact Applicant's representative at the below-listed telephone number if there are any questions regarding this Response.

Respectfully submitted,

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